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GO6F 13/00

GO6F 15/00

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(71)Applicant: RICOH CO LTD

(22)Date of filing:

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(72)Inventor: MOTOYAMA TETSURO

FONG AVERY

(30)Priority

Priority number: 2003 460150

Priority date: 13,06,2003

Priority country: US

2003 460151

13.06.2003

US

2003 460404 2003 460408

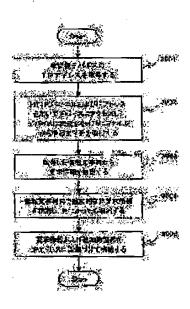
13.06.2003 13.06.2003

US US

(54) REQUESTED INFORMATION EXTRACTING METHOD IN MULTI-PROTOCOL REMOTE MONITORING SYSTEM, INFORMATION STORAGE SYSTEM, INFORMATION CHARACTER STRING ANALYZING METHOD. STATUS INFORMATION EXTRACTING METHOD, SYSTEM AND COMPUTER PROGRAM PRODUCT

#### (57)Abstract:

PROBLEM TO BE SOLVED: To provide a method for efficiently extracting requested information relating to a device to be remotely monitored, which is communicably coupled to a network. SOLUTION: The method for extracting the requested information relating to the device to be remotely monitored, which is communicably coupled to a network, includes the steps of: acquiring an IP address of said device; acquiring an information character string relating to the device by using an HTTP protocol and said IP address to access the device; extracting said requested information from said information character string, searching additional non-requested device information within the information character string and extracting said additional device information when the additional device information is found out (the additional device information being non-requested information); and caching the requested information and the additional device information which is extracted in said search step, while associated with the IP address of the device.



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(43)Date of publication of application: 23.07.1996

(51)Int.Cl.

H04L 29/06 G06F 13/00

GO6F 15/16

(21)Application number: 07-000544

(71)Applicant: MITSUBISHI ELECTRIC CORP

(22)Date of filing:

06.01.1995

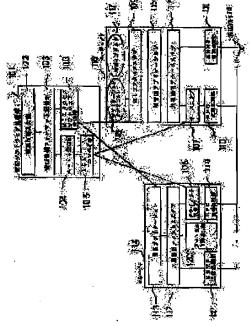
(72)Inventor: MIYAUCHI NAOTO

#### (54) PROTOCOL MANAGEMENT SYSTEM

#### (57) Abstract:

PURPOSE: To level the communication quantities of plural management protocols and make an optimum management communication by a managing device which uses the management protocols together in combination while making those management protocols available.

CONSTITUTION: The management application 113 of a manager 114 is equipped with a common communication access stub 112 which assembles operation requests to access an application object 118 and a management object 117 according to management information definitions and gives plural protocols a common interface. Further, the application object 118 or management object 117 of an agent 116 is controlled through a protocol communication processing part 111 or 110 and a transmission line 119. A protocol automatic selecting means 120 periodically measures the communication quantities by the protocols on the transmission line 119 to automatically select a protocol to be used.



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2001-282492

(43) Date of publication of application: 12.10.2001

(51)Int.Cl.

G06F 3/12 B41J 29/38

(21)Application number: 2000-098594

(71)Applicant: CANON INC

(22)Date of filing:

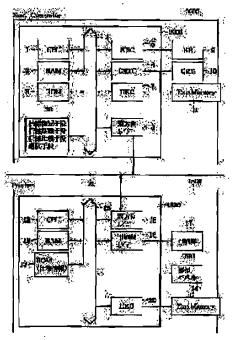
31.03.2000

(72)Inventor: TAKEDA MITSUHIRO

# (54) DATA PROCESSOR, METHOD FOR SELECTING PRINTER FOR DATA PROCESSOR AND STORAGE MEDIUM

#### (57) Abstract:

PROBLEM TO BE SOLVED: To automatically select a printer device coincident with specifications intended by a user or almost coincident with specified specifications by simple operation for specifying intended specification information. SOLUTION: A printer selection processing part 30 acquires and recognizes inherent specification information from plural printers including a printer 1500, compares the specification information of respective recognized printer devices with the specified specification information and selects a printer device to output printing information.



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11-203077

(43) Date of publication of application: 30.07.1999

(51)IntCl.

G06F 3/12 B41J 29/38

(21)Application number : 10-002039

(71)Applicant: SEIKO EPSON CORP

(22)Date of filing:

08,01.1998

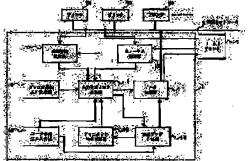
(72)Inventor: YAMATO MASAHIRO

#### (54) PRINTING SYSTEM AND PRINTER SELECTION METHOD

(57) Abstract:

PROBLEM TO BE SOLVED: To automatically select a printer optimum for printing from plural printers based on a print condition which a user inputs to a printer driver.

SOLUTION: An output printer selection part 11 automatically selects the optimum printer which satisfies the printing condition of the user based on the printing condition which the user inputs at the time of printing on various condition items on resolution, printing speed and a paper size, basic information showing the performance and the specification of the printers 2a-2c, a printer selection condition showing the significance of the individual condition items to the user, present status information of the printers 2a-2c and the features of the number of pages on the document of a printing object and the complication of a picture. A printing data generation part 18 generates printing data with a control command which the selected optimum printer can analyze and a data transfer part 17 sends printing data to the optimum printer.



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(51)Int.Cl.

GO6F 15/16 GO6F 15/177

(21)Application number : 08-072561

(71)Applicant: HITACHI INF SYST LTD

(22)Date of filing:

27.03.1996

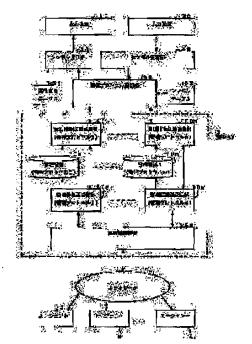
(72)Inventor: WADA YOSHINARI

### (54) NETWORK MANAGEMENT SYSTEM

#### (57) Abstract:

PROBLEM TO BE SOLVED: To easily grasp a network management protocol to be used and to make it possible to change the network management protocol by simple operation.

SOLUTION: After storing constitutional information transmitted in accordance with a collection request to respective constitutional elements of a network, a network constitution map relating symbol graphics to respective constitutional information based upon a symbol table 52 is displayed. Sub-symbols expressing management protocols to be used for the constitution management are also displayed on respective constitutional elements in the map. Thus a network manager can easily change a management protocol by executing updating instruction request operation for a specific symbol. Thereby load to the whole network system can simply be suppressed to minimum by changing the



constitution so that plural kinds of communication traffic by management protocols are not overlapped each other.

(11) Publication number:

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(43)Date of publication of application: 23.06.2000

(51)Int.Cl.

G06F 13/00 H04L 12/24

H04L 12/26

(21)Application number: 10-344607

(71)Applicant : CANON INC

(22)Date of filing:

03.12.1998

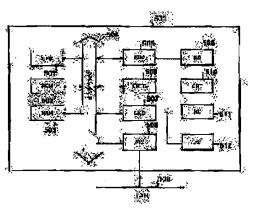
(72)Inventor: IGARASHI TOSHIAKI

## (54) NETWORK CONSTITUTION INVESTIGATION METHOD, NETWORK EQUIPMENT CONTROL METHOD AND DEVICE THEREFOR

(57)Abstract:

PROBLEM TO BE SOLVED: To perform recognition even for a management object device connected to a network by using a different protocol by performing a search by using the plural protocols at the time of preparing a device list.

SOLUTION: This method is provided with a request step for transmitting the data of requesting a response onto the network based on plural communication protocols and a recognition step for recognizing equipment connected to the network and the communication protocol to which each equipment can correspond based on the response to the response request. For instance, a network management software is, stored in a hard disk 511 and executed by a CPU 501. At the time, the CPU 501 uses a RAM 503 as a work area. In the management software, a search module searches the device connected to the network. Then, modules searched by the module are listed and displayed by the device list.



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(71)Applicant: RICOH CO LTD

(22)Date of filing:

23.01.2004

(72)Inventor: MOTOYAMA TETSURO

(30)Priority

Priority number: 2003 372939

Priority date: 26.02.2003

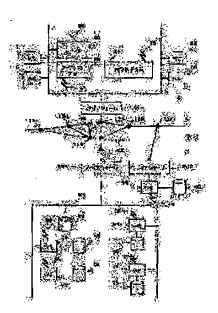
Priority country: US

# (54) METHOD AND SYSTEM FOR MONITORING DEVICE CONNECTED TO NETWORK BY USING A PLURALITY OF PROTOCOL AND COMPUTER PROGRAM PRODUCT

(57)Abstract:

PROBLEM TO BE SOLVED: To monitor an arbitrary device among devices different from one another connected to a network.

SOLUTION: A step where a first data base is accessed through a hardware access module is included. The first data base is configured to support a plurality of communication protocols, and stores information used by the plurality of protocols in order to judge the manufacturer or model information of a device to be monitored. The communication protocol is selected from the plurality of communication protocols, and the selected communication protocol is configured so that status information can be received from the device to be monitored. The received status information is stored into a second data base, and the received status information is analyzed, and a parameter value showing the operation status of the device to be monitored is extracted,



and the operation status information corresponding to the extracted parameter is extracted from the second data base.

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2004-086887

(43) Date of publication of application: 18.03.2004

(51)Int.Cl.

G06F 13/00 H04L 12/28

(21)Application number: 2003-203253

(71)Applicant: RICOH CO LTD

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29.07.2003

(72)Inventor: MOTOYAMA TETSURO

(30)Priority

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Priority date : 22.08.2002

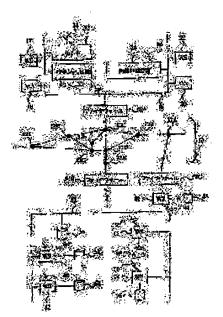
Priority country: US

## (54) METHOD AND SYSTEM FOR MONITORING NETWORK CONNECTION DEVICE USING PROTOCOLS

#### (57)Abstract:

PROBLEM TO BE SOLVED: To monitor different devices in environment with many vendors without being provided with specific private management information base (MIB) information; and to enhance function extracting and displaying detailed information in a form understandable to a user or in a user-friendly form.

SOLUTION: A method for monitoring a device in respective devices communicatably connected to a network is described. In this method, a device is accessed using a first communication protocol, information is received from the accessed device, a parameter value indicating operation state of the device is extracted by analyzing the received information and data character strings relating to the respective extracted parameter values are stored. Operation state information corresponding to the extracted parameter value is taken out of a database. When the first



communication protocol does not form configuration for taking out requested information from the accessed device, the device monitored by using a second communication protocol is accessed.

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2004-213654

(43) Date of publication of application: 29.07.2004

(51)Int.Cl.

G06F 13/00

G06F 11/30

(21)Application number: 2003-427482

(71)Applicant: RICOH CO LTD

(22)Date of filing:

24.12.2003

(72)Inventor: MOTOYAMA TETSURO

**FONG AVERY** 

(30)Priority

Priority number : 2002 328003

Priority date : 26.12.2002

Priority country: US

2002 328008

26.12.2002

iuy.us

2002 328026

26.12.2002

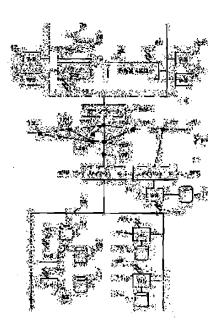
US US

## (54) METHOD, DEVICE AND SYSTEM FOR OBTAINING AND MAINTAINING INFORMATION OF MONITORING DEVICE

#### (57)Abstract:

PROBLEM TO BE SOLVED: To monitor various types of devices in multivender environment.

SOLUTION: A communication system is provided with a single or a plurality of monitoring object devices communicably connected to a monitoring system and database having information related to the single or the plurality of monitoring object devices. This system allows the monitoring system to access to the database for obtaining information related to the monitoring object devices, sets the information obtained from the database in a first data structure, determines whether the monitoring object device is supported by the monitoring system using the information from the database and, when the monitoring object device is supported by the monitoring system, sets up the communication with the monitoring object device for obtaining the status information of the monitoring object device.



(11)Publication number:

2002-041374

(43)Date of publication of application: 08.02.2002

(51)Int.Cl.

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HO4M 11/00

H04Q 9/00

(21)Application number: 2001-146863

(71)Applicant: RICOH CO LTD

(22)Date of filing:

16.05.2001

(72)Inventor: MOTOYAMA TETSURO

**FONG AVERY** 

(30)Priority

Priority number: 2000 453934

Priority date: 17.05.2000

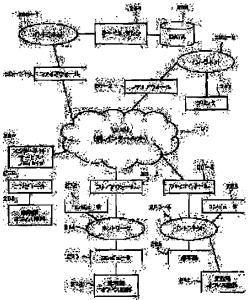
Priority country: US

# (54) COMPUTER PROGRAM AND METHOD FOR REMOTE MONITORING AND RECORDING MEDIUM

#### (57)Abstract:

PROBLEM TO BE SOLVED: To attain an effective remote monitoring system for various types of equipment and tools, etc.

SOLUTION: For instance, an application unit such as office equipment 268 monitors an event and the monitoring data are transmitted to a remove service machine 254. Under such conditions, plural data formats and/or communication protocols are supported for attaining sure transmission of the monitoring data and facilitating construction of a communication system. Then a computer code means such as a verified dynamic link library that can be shared is used so that no duplication of an existing function is needed. Thus, a remote monitoring system is effectively constructed with its improved reliability.



(11)Publication number:

2002-149374

(43)Date of publication of application: 24.05.2002

(51)Int.Cl.

G06F 3/12 B41J 29/38

(21)Application number: 2001-271146

(71)Applicant: HEWLETT PACKARD CO <HP>

(22)Date of filing:

07.09.2001

(72)Inventor: BOYCE JAMES S

(30)Priority

Priority number : 2000 677933

Priority date: 03.10.2000

Priority country : US

#### (54) METHOD FOR SELECTING PRINTER BY USING PRINTER ATTRIBUTE

(57)Abstract:

PROBLEM TO BE SOLVED: To select an optimum printer among a plurality of printers.

SOLUTION: The printer is selected among the plurality of available printers by using a selection reference. The attribute of the respective available printers are collected. A list of qualifying printers among the available printers is generated and selectively displayed to a user. The selected attribute of each printer is also displayed in the list of the qualifying printers. The selection reference is applied to the attribute of each printer in the list of the qualifying printers. The printer is selected form the list of the qualifying printers among the available printers. Configuration information can be extracted for each printer by transmitting an SNMP(Simple Network Management Protocol) command requesting the configuration of each printer to each printer.

